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ePoster Viewing

Intravascular catheter-related infections

Central catheter duration of placement and risk of central line-associated bloodstream infections (CLABSI) in critically ill patients

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Objective: Central catheters are vital for the care of hospitalized and critically ill patients, as they provide reliable venous access for clinical activities such as blood sampling, infusion of medications, and hemodynamic measurement. However, they are also the leading cause of healthcare-associated bloodstream infections and are frequently implicated in life-threatening illnesses. The aim of the present study was to determine whether longer duration of catheter placement was related to an increase in the rate of central line-associated bloodstream infections (CLABSIs) for central venous catheters (CVCs) and peripherally inserted central catheters (PICC).

Materials/Methods: We performed a retrospective study of critically ill patients from all hospital units who had a CVC or PICC inserted and developed a CLABSI between January 1, 2014, and September 30, 2015.

Results: A total of 70 CLABSI cases were identified, 52 of them associated with CVCs and 18 with PICC lines, over 20,884 catheter days (9774 CVCs, 11,110 PICC). The rate of PICC-associated CLABSI was 1.62 per 1000 catheter-days (average PICC catheterization, 22.78 days). The rate of CVC-associated CLABSIs was 4.80 for catheter duration of 2-10 days, 5.22 for 11-20 days, and 6.48 for >20 days.

	2-10 days	11-20 days	>20 days	PICC
# of caths	904	202	81	639
Cath. Days	4585	2874	2315	11110
CLABSI rate	4,80	5,22	6,48	1,62
CLABSI %	2,43%	7,43%	18,52%	2,82%

Conclusions: In the CLABSI rate originated from CVCs, our data show a gradual increase for longer duration of catheter placement. PICC lines were associated with significantly lower CLABSI rates, despite the longer average duration of placement.